JEDIC Journal of Ethics and Diversity in International Communication

| e-ISSN: 2792-4017 | www.openaccessjournals.eu | Volume: 2 Issue: 5

Characteristics of Interdiscipline Approaches: Philosophical Analysis

Gulchehra G'affarova

Chirchik State Pedagogical Institute, Faculty of Humanities, Professor of the Department of National Idea, Spirituality and Legal Education, Doctor of Philosophy

Annotation: The interdisciplinary approach is based on the formation of a new paradigm in scientific knowledge, which is necessary to give a holistic view of the universe, and has an important methodological significance in the development of science. The development of the interdisciplinary approach is determined by the systematization of knowledge acquired in modern science, linking them to each other, putting them into a specific form, applying them in practice, control. This article provides a philosophical analysis of the specifics of interdisciplinary approaches.

Keywords: approach, direction, interdisciplinary approach, disciplinary approach, multidisciplinary approach, interdisciplinary approach.

INTRIDUCTION

Interdisciplinary evolving systems are a more complex object shape than self-regulating systems. An interdisciplinary evolving system forms new levels of its structure over time, with the emergence of each new level influencing previously formed levels and changing their elements, structure, and relationships. Approaches in the private sciences often fail to fully study the properties of complex objects. Science has an unlimited nature for approaches. Most importantly, they must be relevant to the scientific worldview. Therefore, different approaches emerge, evolve, and in the development of science, the solution of a certain problem to the views of the scientific world can be achieved or denied by success. Such new approaches are largely driven by the purpose of the study.

The uniqueness of the interdisciplinary approach is that it has the ability to transfer the research method from one subject to another. Conducting research methods implies the similarity of processes in the field of research in the sciences. For example, the blood transport system is similar to the movement in the pipes of a technical object. This allows the biologist to use methods in physics to explain the movement of fluid through pipes. In this case, an interdisciplinary approach - biophysics emerges [11, 184]. For example: epistemologically, a new science (biophysics) is one of the epistemological aspects of the gradual acquisition of different biological and physical levels of cognition, the study of mechanisms of cognitive development, identification of similarities and differences in the sciences. In order to preserve the pieces of science, interdisciplinary research shows the "basic", "leading" science. Based on research from any “basic” science methodology, there will be an impact of a “leading” science approach. Therefore, the interdisciplinary approach is useful in the study of problems in a specific science, which uses the need for conceptual, methodological assistance.

The introduction of these approaches not only in the research process but also in the education system will be effective. That is, each interdisciplinary approach is clearly reflected in the solution of specific problems in science. Therefore, we have reason to believe that goal-oriented interdisciplinary approaches are one of the key measures to solve the problems of the XXI century. Evidence of this can be found in the conference "World Declaration on Higher Education for the

ISSN 2792-4017 (online), Published under Volume: 2 Issue: 5 in May-2022
Copyright (c) 2022 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY).To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/

XXI Century: Approaches and Practical Measures" [22], organized by UNESCO in Paris in the fall of 1998. It contained recommendations to encourage the transdisciplinary nature of educational programs and to teach students to use transdisciplinary education in solving problems of modern science and practice.

Nevertheless, it is no exaggeration to say that all the conceptual, methodological and organizational issues related to interdisciplinary work have been brought to a state of crystal clarity. In the literature, four concepts of interdisciplinary relevance compete [7]. We have a general understanding of how to train specialists to solve interdisciplinary problems, what objects require an interdisciplinary approach, what problems are considered interdisciplinary, what is the difference between them and those that need to be considered comprehensively, how to combine research results on individual aspects of an interdisciplinary problem no That is why F.E. According to Ajimov, not enough work is being done to consider how interdisciplinary communication is reflected in the field of teaching, in the content of curricula and in the educational process in general [1, 74].

The interdisciplinary approach is the study of an object in a comprehensive, comprehensive way, that is, from the point of view of different sciences, directions and fields. It is also characterized by the emergence of new approaches in the process of scientific knowledge, based on the purpose of research. Accordingly, there are no restrictions on the number of interdisciplinary approaches in the process of scientific learning. However, they are required to conform to the existing scientific worldview. That is why such approaches emerge, take shape, and come out of scientific circulation. That is, they may disappear along with the development of the scientific worldview of science, and may also show their success or failure in finding solutions to specific problems. In this sense, it is natural that interdisciplinary approaches change with the development of scientific knowledge.

It is on the basis of the various transitions mentioned above that such directions as multidisciplinary, plura-disciplinary and interdisciplinary have been formed in the field of scientific research. These are the main directions of the interdisciplinary approach. Let's talk about their specific features.

Multidisciplinary or multidisciplinary (multidisciplinary approach) is a way to expand the scientific worldview in the direction of a holistic image of the object of research, which forms a generally accepted level of moral responsibility for the results and consequences of professional activities of disciplinary professionals. That is, the essence of this approach is “the use of knowledge and skills in a number of disciplines” [18].

In modern epistemology, there are different views on a multidisciplinary approach to scientific knowledge. Within one of them, a multidisciplinary approach is seen as a one-sided addition of one scientific discipline to another [21, 139]. The multidisciplinary approach in history is sometimes defined by the interdisciplinary nature of “epistemic import” - it is possible to apply explanatory models of different scientific disciplines to the subject of history [2]. It can be said that a multidisciplinary approach to historical knowledge is a form and method of studying historical reality. That is, a multidisciplinary approach is one of the forms of organizing interdisciplinary research aimed at overcoming disciplinary constraints in the study of this history.

The multidisciplinary approach as a method of cognition is a version of the integrity of historical knowledge, the methodological aspect of which is manifested in the tendency of different scientific research methods to complement each other. Through a multidisciplinary approach to such historical knowledge, first, a method of reviewing history aimed at restoring historical integrity [3, 9 - 10]; second, an integrated research strategy that involves the acquisition of new knowledge in

ISSN 2792-4017 (online), Published under Volume: 2 Issue: 5 in May-2022
Copyright (c) 2022 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY).To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/

history by supplementing real historical methods with research approaches and methods developed in other disciplines [12, 156-157]; third, new directions are emerging, such as research technology [8, 360], based on the internal compatibility, complementarity, and overall focus of a set of tools that are disciplined. This contributes to a deeper study of the science of history and the acquisition of qualitatively new historical knowledge of a synthetic nature through the use of research tools derived from other disciplines in historical knowledge.

The multidisciplinary approach is widely used not only in theory but also in practice. In particular, it can be seen that it is more widely used in medicine. A multidisciplinary approach ensures the participation and collaboration of multiple physicians in the management of a single patient, which allows optimization of diagnostic and treatment processes. It is widely used in many clinics and centers, especially in multidisciplinary medical institutions. Also, the exchange of experience between specialists of different profiles on modern diagnostic and treatment methods, in-depth study of complex clinical cases with the participation of leading specialists of local and foreign oncology provides invaluable experience for use in daily practice. In particular, screening, early diagnosis, minimally invasive and interventional surgery, innovative methods of drug and radiation therapy, endoscopic oncology, treatment of complications of basic treatment methods are leading to positive results as a result of a multidisciplinary approach.

An example of a multidisciplinary approach is logocentrism in science. The famous mathematician and philosopher R.I. According to Pimenov, “it was a science that changed our world. It was the most powerful force ”and states that“ words in science often have equations, formulas, or logical structures that are highly interconnected ”[10, 6].

Indeed, the multidisciplinary approach is now widely used in the historical study of methodological structures and methods of such disciplines as cultural studies, anthropology, psychology, sociology, economics, political science, demography, regional studies, linguistics, mathematics, computer science. At the same time, a multidisciplinary approach, a cognitive strategy aimed at obtaining synthetic knowledge, opens up great prospects for comparative historical research.

An interdisciplinary approach (interdisciplinary approach) is one of the ways to expand the scientific worldview, which involves the study of various phenomena outside the scope of a single scientific discipline. This is one of the ways in which different specialized scientific practices interact. In particular, at the intersection of history and other scientific disciplines is the use of their theoretical potential and scientific language in the interpretation of scientific facts to define research tasks and to describe history as a whole.

MATERIALS AND METHODS

The concept of "interdisciplinary" came into scientific circulation in the second half of the twentieth century, "reflecting the changes in epistemological instructions and changing its meaning several times" [13, 5]. Indeed, although the concept of interdisciplinary (interdisciplinary) began to be used in the twentieth century, the general idea is rooted in the past. Tatiana Augsburg, an associate professor at the University of San Francisco, shows in her research that interdisciplinary relations originated in Greek philosophy.

Julie Thomson Klein, a professor at Wayne University in Detroit (USA), points out that the basis of this concept is some ideas that are disseminated through generally accepted standard knowledge, knowledge synthesis, and integration ideas [19, 331].

So what are the definitions of the concept of “interdisciplinary relevance”? In particular, the Webster encyclopedic dictionary provides the following definition: "Interdisciplinary includes two

ISSN 2792-4017 (online), Published under Volume: 2 Issue: 5 in May-2022
Copyright (c) 2022 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY).To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/

or more scientific, scholarly, or artistic disciplines" [15]. However, in Princeton University (USA), interdisciplinary is a combination of two or more disciplines.

The Dictionary.com platform defines the concept of "interdisciplinary relevance" as a combination of two or more academic disciplines or developed disciplines, as well as a combination of two or more professions, technologies, and so on [17]. It should be noted that, unlike traditional views on the set of knowledge in a particular subject, it does not emphasize the limitations of interdisciplinary knowledge, but "focuses on the connections and relationships between different disciplines studying its subject" [9, 27].

Professor Nissani Moti explores the interdisciplinary concept by breaking the word into its constituent parts, i.e., the words inter (between, in the middle, connecting) and disciplinarity (disciplinary). In his view, interdisciplinary is the union of two or more disciplines into one whole. Indeed, interdisciplinary approaches focus on solving complex and large-scale problems within the same discipline. To achieve a common goal, researchers, faculty, and students contribute to linking and integrating two or more scientific disciplines, professions, or technologies with their own methods and perspectives.

"Interdisciplinary" quality is widely used, especially in education. Two or more science researchers combine their approaches and modify them in such a way that students can easily master a given topic within many traditional disciplines in order to solve certain problems in an acceptable way. Interdisciplinary (Interdisciplinary Relationship) studies science in different directions, penetrates the sciences, and creates a new way of understanding a topic. So, interdisciplinary connection is one of the ways to expand the scientific worldview, which is the study of various phenomena outside the scope of a single scientific science. This is one of the ways in which different special scientific practices interact.

RESULTS AND DISCUSSION

Interdisciplinary (interdisciplinary) generalizations are one of the factors in optimizing the teaching process, increasing its effectiveness and eliminating the overload of teachers and students. At the same time, interdisciplinary (interdisciplinary) generalizations help to create a single methodological essence of the integrated science system, in which priority is given to the systematized scientific ideas that are embedded in teaching in all disciplines. Interdisciplinary generalizations in a logically complete form represent a formally expressed conscious relationship between elements of the structure of different academic disciplines. Therefore, interdisciplinary (interdisciplinary) generalizations are not only a means of comprehensive development of the student's personality, but also one of the ways to form certain pedagogical tasks, to create a common subject system of knowledge, skills and attitudes.

The origin of interdisciplinary (interdisciplinary) generalizations in classical science is associated with the search for ways to reflect the integrity of nature in the content of educational material, which contributes to the emergence of the idea of subject synthesis. Therefore, "everything that is interconnected must be taught in the same way" [5, 248].

Thus, interdisciplinary (interdisciplinary) generalizations are a synthesizing factor between objects, events and processes that are reflected in the content, forms and methods of the learning process, performing educational, developmental and pedagogical tasks in a limited unit.

A distinctive feature of polydisciplinary (also called multidisciplinary in the international community) is the study of any event or object (planet Earth, man, etc.) simultaneously and from different angles by several scientific disciplines [4, 193].

ISSN 2792-4017 (online), Published under Volume: 2 Issue: 5 in May-2022
Copyright (c) 2022 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY).To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/

Interdisciplinary research allows the transfer of research methods directly from one scientific discipline to another, which is due to the similarity of the disciplines studied. The multidisciplinary approach tends to use a generalized picture of the research topic, in relation to which all its disciplinary pictures appear as parts of it, so the transfer of research methods from one subject to another occurs as a rule and all disciplines continue to remain within their methodological principles. does not investigate.

Comparing the results of disciplinary research within a multidisciplinary (polydisciplinary) approach allows us to find new, previously undefined similarities in the disciplines being studied, leading to new interdisciplinary research. As a successful experiment in interdisciplinary research in economic research, through "quantum economics" [6], quantum physics once enabled classical physics to "go beyond the scientific boundaries" of the microworld, significantly enriching scientific knowledge and giving society nuclear energy and nanotechnology.

In high-level methodology - interdisciplinary research as a way to expand the scientific worldview - this or that phenomenon is considered outside the scope of any scientific discipline; the "exit" is oriented toward the macrocosm. A particular world with natural physical and (or) logical boundaries, each part of the environment, each of their territories is initially considered as an "orderly environment", the same principles, approaches and models can be applied to study them.

CONCLUSION

Thus, the interdisciplinary approach, as a form of methodological communication, also has its own meaning. Such an approach alters the function of epistemology in an interdisciplinary approach. The methodology of case studies forms a relationship between epistemology on the one hand and specialized disciplines on the other. According to the level of completeness of knowledge about the world around them, four main types are distinguished as criteria for classifying scientific approaches: interdisciplinary, interdisciplinary, multidisciplinary (polydisciplinary) and transdisciplinary systematic approaches. In such interdisciplinary approaches, epistemological aspects provide an opportunity to describe and study the ways in which sciences combine. Researchers will also gain a comprehensive systematic knowledge of complex structural objects based on interdisciplinary approaches.

References:

1. Ажимов Ф.Е. Что такое междисциплинарность сегодня? (Опыт культурно-исторической интерпретации зарубежных исследований) // Вопросы философии. 2016. № 11, сс. 70-78
2. Вахштайн В. Эпистемические интервенции: скромное обаяние «чужих» объяснительных моделей. [Электронный ресурс]. URL: http://www.hse.ru/news/recent/49103686.html [февраль, 2014].
3. Гуревич А. Я. Историк конца XX века в поисках метода // Одиссей. Человек в истории. 1996. М., 1996. С. 9- 10.
4. Князева Е.Н. Трансдисциплинарные стратегии исследований // Вестник ТГПУ (TSPU Bulletin). 2011. 10 (112), -С.193.
5. Коменский, Я.А. Избранные педагогические сочинения: в 2 т. / Я.А. Коменский. – М.: Педагогика, 1975. – Т. 1. – С.248.
6. Мельников В.А. Квантовая экономика. – Красноярск: Сибирский федеральный университет, 2007.

ISSN 2792-4017 (online), Published under Volume: 2 Issue: 5 in May-2022
Copyright (c) 2022 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY).To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/

7. Мокий В.С. Трансдисциплинарность в современной науке. Код доступа: http://www.dic.academic.ru/dic.nsf/ruwiki
8. Николаева И. Ю. Полидисциплинарный синтез и верификация в истории. Томск, 2010. С. 360.
9. Овсянникова, О.А. Формирование профессиональной готовности учителя музыки в процессе учебной деятельности / О.А. Овсянникова, Е.П. Решетников // Вопросы теории и методики музыкального исполнительства и интерпретации художественного произведения: материалы заоч. межвуз. науч.-практ. конф., посв. 10-летию кафедры музыкального образования БГПУ им. М. Акмуллы. – Уфа: Изд-во БГПУ, 2009. – С. 26 – 35
10. Пименов Р. Логоцентричность // Истоки. – 2014. – 23 апреля. — № 16. – С. 6.
11. Рапопорт Г.Н., Герц А.Г. Биологический и искусственный разум: Сознание, мышление и эмоции. Ч.1 Книжный дом ЛИБРОКОМ. 2011. – С.184.
12. Репина Л. П. Историческая наука на рубеже XX-XXI вв.: социальные теории и историографическая практика. М., 2011. С. 156-157.
13. Репина, Л.П. Опыт междисциплинарного взаимодействия и задачи интеллектуальной истории / Л.П. Репина // Диалог со временем. Альманах интеллектуальной истории. Вып. 15. – М., 2005. – С. 5.
14. Словарь Принстонского университета [Электронный ресурс]. – Режим доступа: http://www.princeton. edu/main/library.
15. Энциклопедический словарь Вебстера [Электронный ресурс]. – Режим доступа: http:// www.merriamwebster.com.
16. Ausburg, T. Becoming Interdisciplinarity: An Introduction to Interdisciplinarity Studies / T. Ausburg. – 2nd ed. – N.Y.: Kendall Hunt Publishing, 2012. – 210 p
17. Dictionary.com [Электронный ресурс]. – Режим доступа: http://Dictionari.com.
18. https://ru.wiktionary.org/wiki/
19. Klein, J.Th. Interdisciplinarity: History, Theory and Practice / J.Th. Klein. – Detroit: Wayne State University Press, 1990. – 331 p.
20. Moti, N. Ten Cheers for Interdisciplinarity / N. Moti // Social Science Journal 34. – 1997. – № 2. – P. 201 – 216.
21. Piaget J. The epistemology of interdisciplinary relationships // Interdisciplinary. Problems of Teaching and Research in Universities. P., 1972. P. 139
22. UNESCO on the World Conference on Higher Education (1998). Higher Education in the Twenty-First Century: Vision and Action. Available at: http://www.unesco.org/cpp/uk/declarations/world.pdf).

ISSN 2792-4017 (online), Published under Volume: 2 Issue: 5 in May-2022
Copyright (c) 2022 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY).To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/